

APPROVED	O.G. FIG.	
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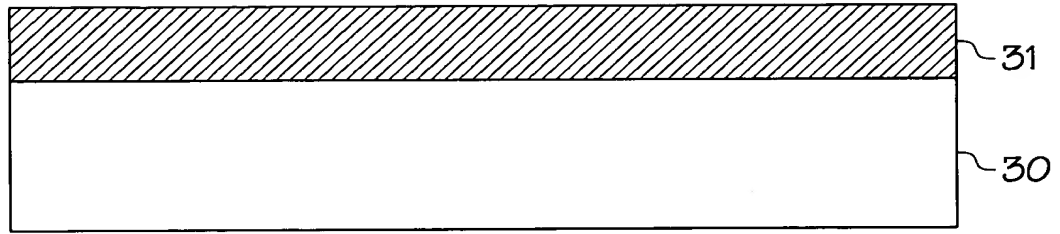


FIG. 1A

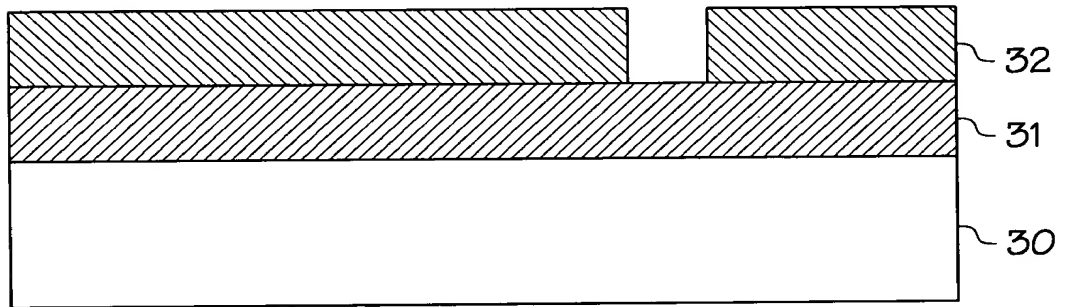


FIG. 1B

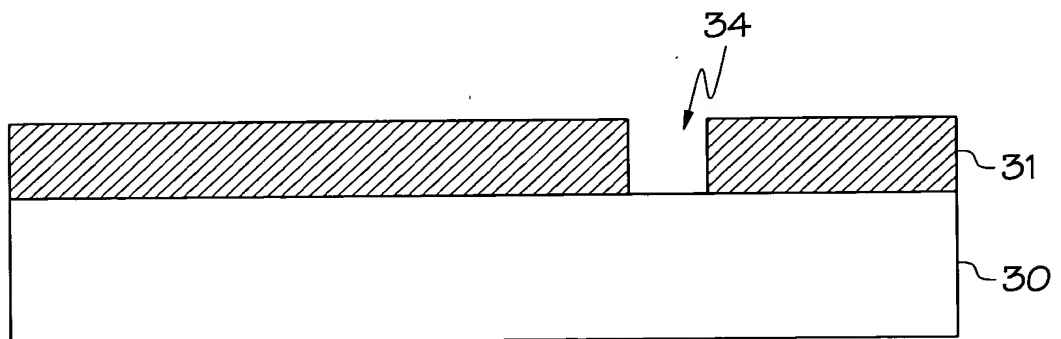


FIG. 1C

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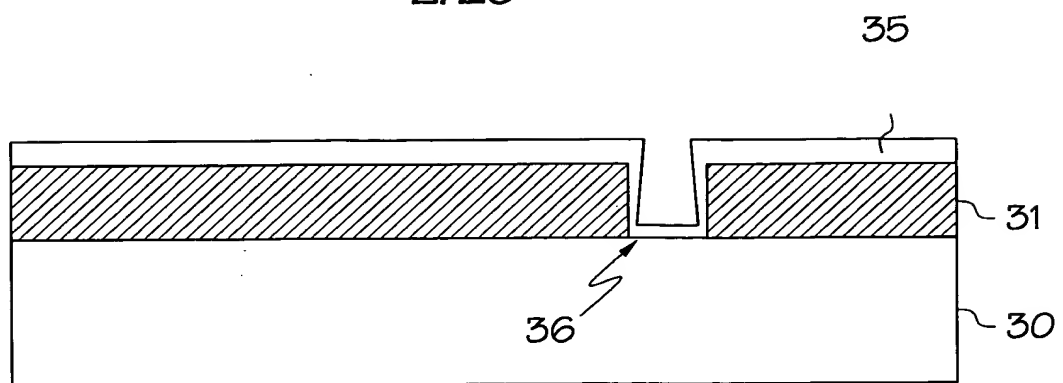


FIG. 1D

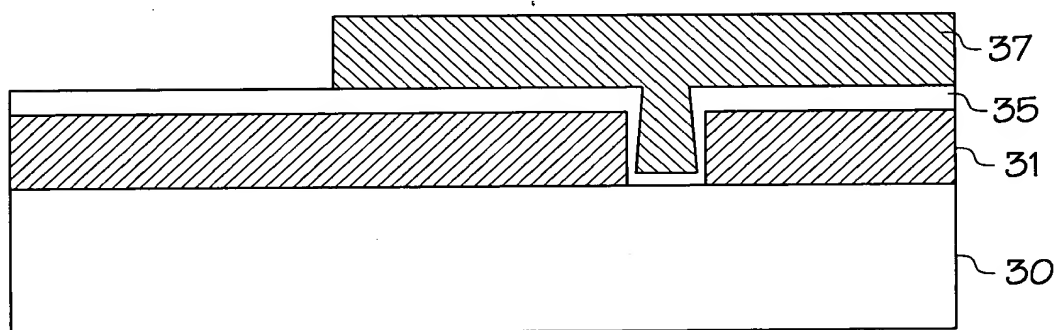


FIG. 1E

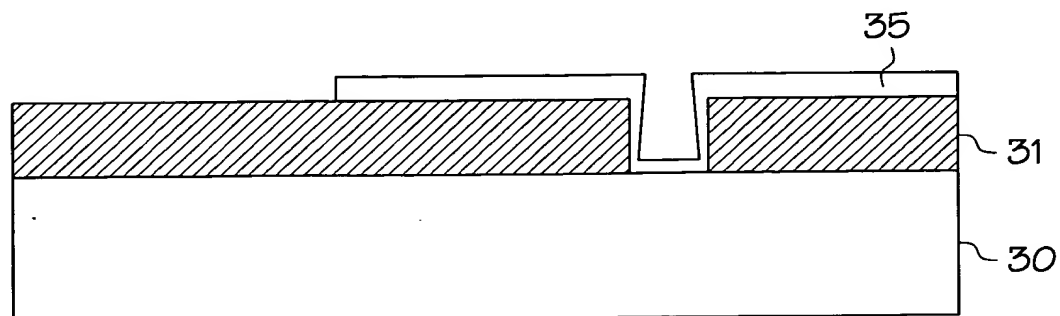


FIG. 1F

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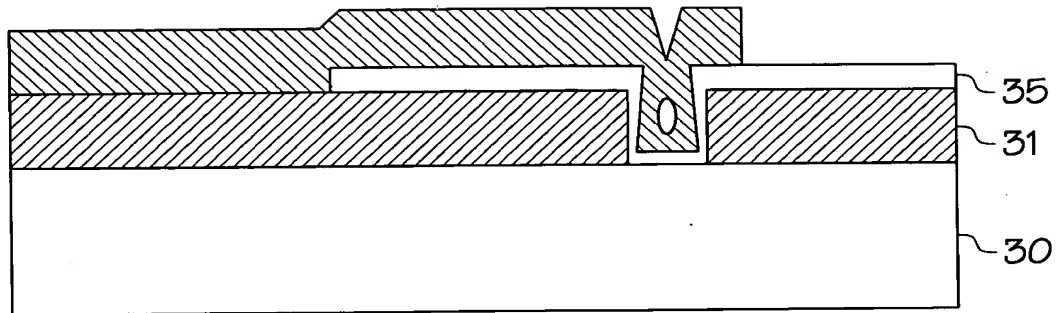


FIG. 1I

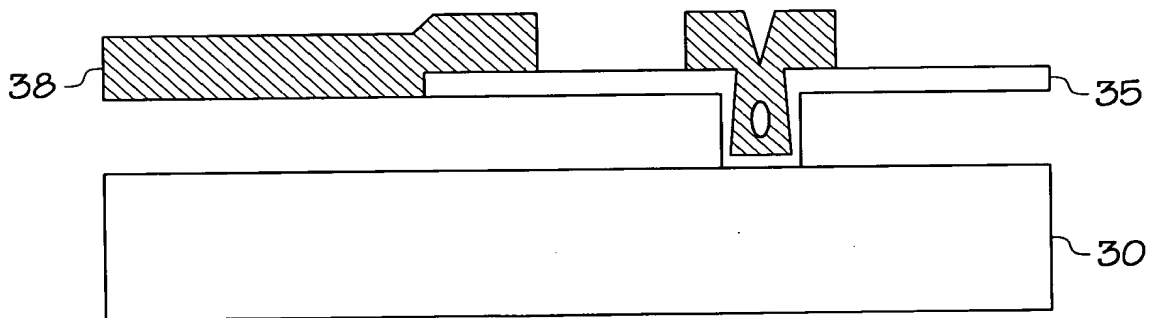


FIG. 1J

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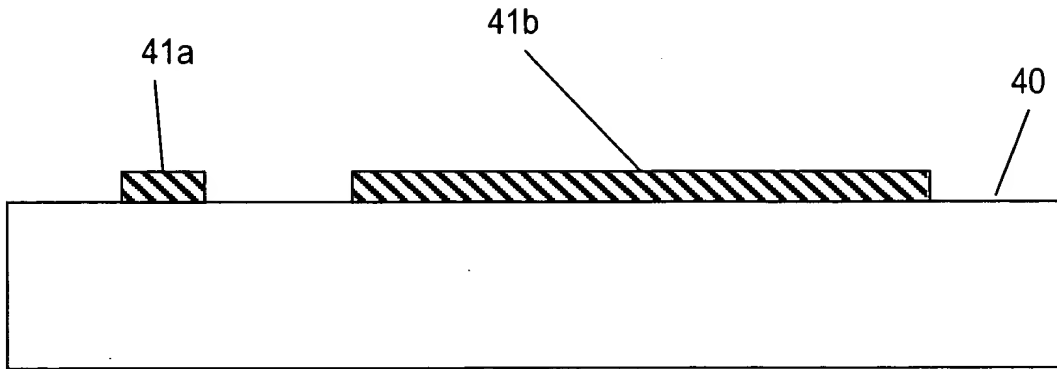


FIG. 2A

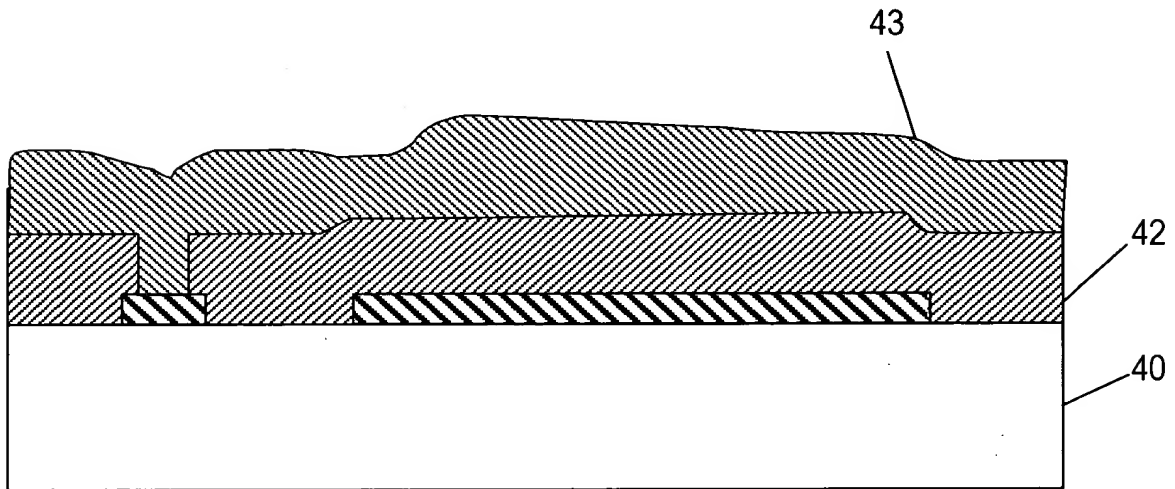


FIG. 2B

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APPROVED	O.G. FIG.	
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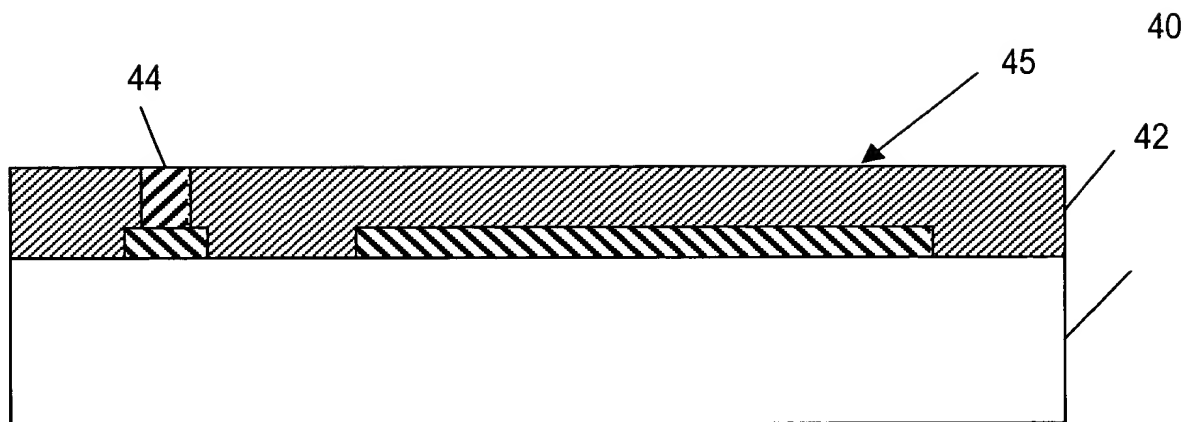


FIG. 2C

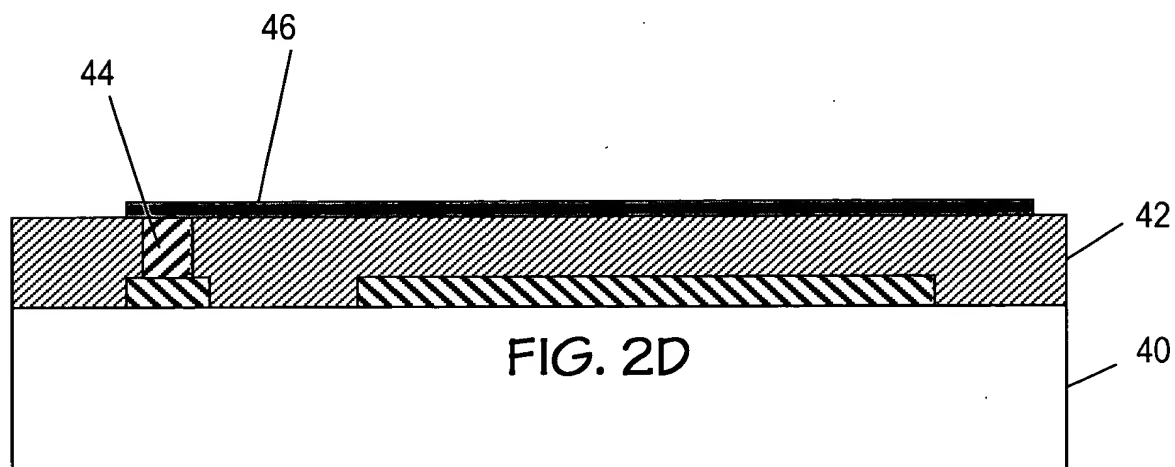


FIG. 2D

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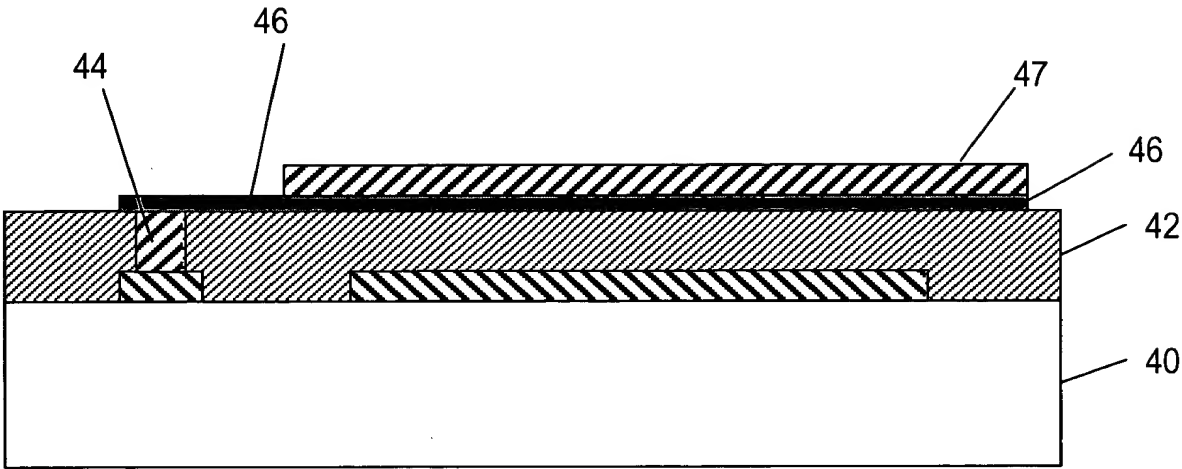


FIG. 2E

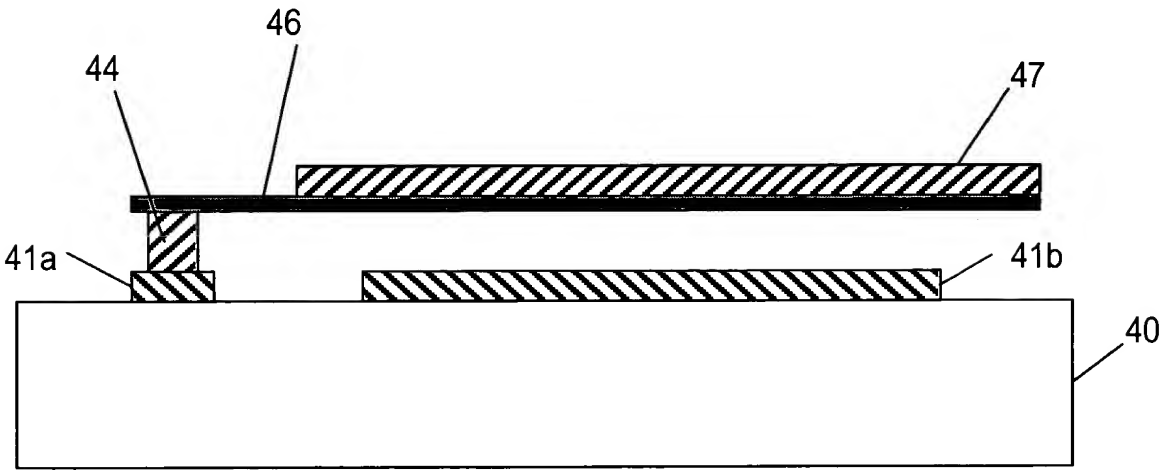


FIG. 2F

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FIG. 2E

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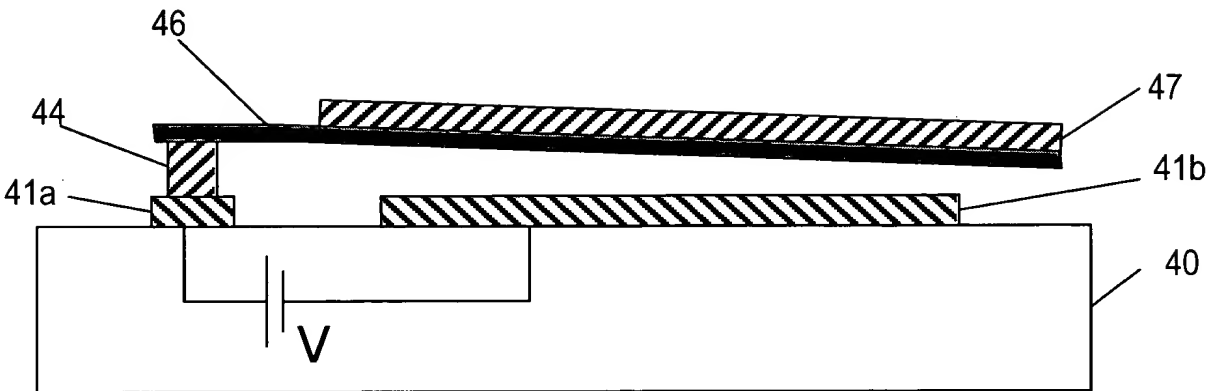


FIG. 2G



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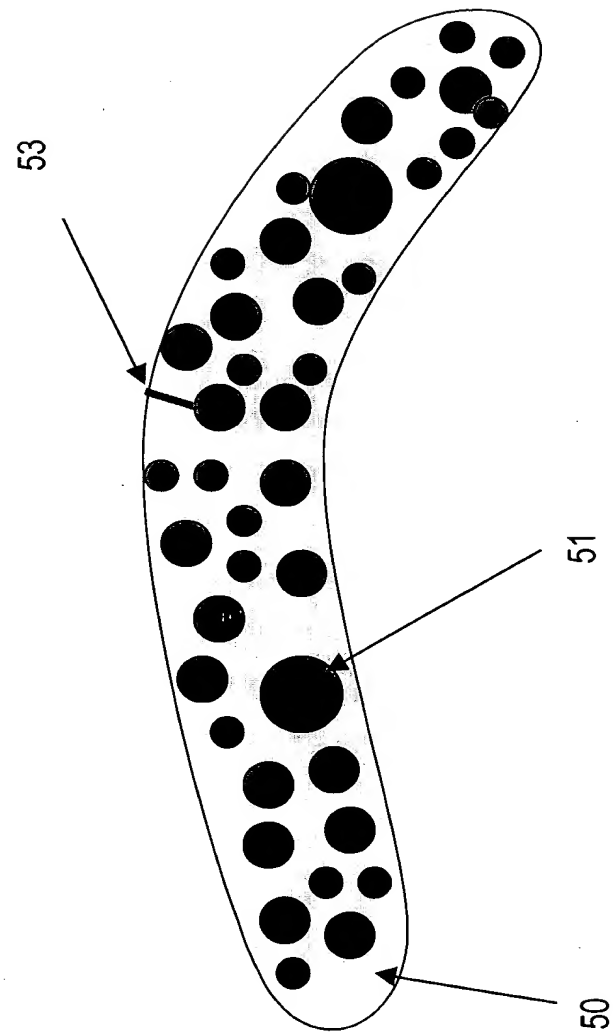
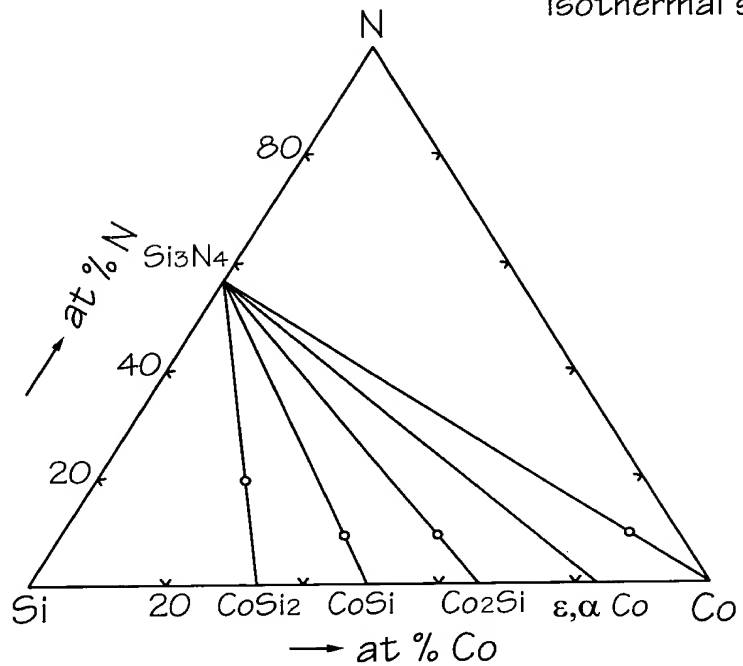


FIG. 3

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Co-Si-N Isothermal Section  
at 1000°C

isothermal section 1273 K

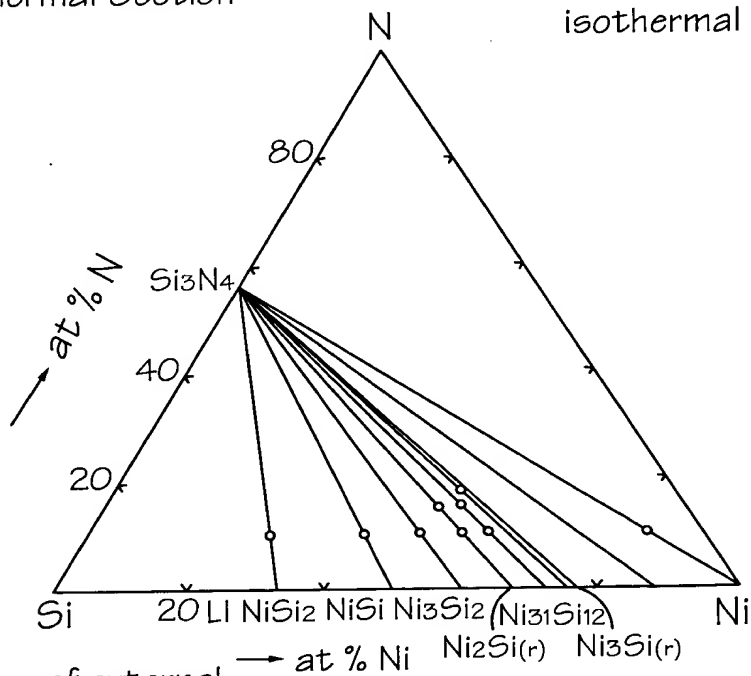


In the absence of external  
nitrogen pressure.

FIG. 4A

Ni-Si-N Isothermal Section  
at 900°C

isothermal section 1173 K



In the absence of external  
nitrogen pressure.

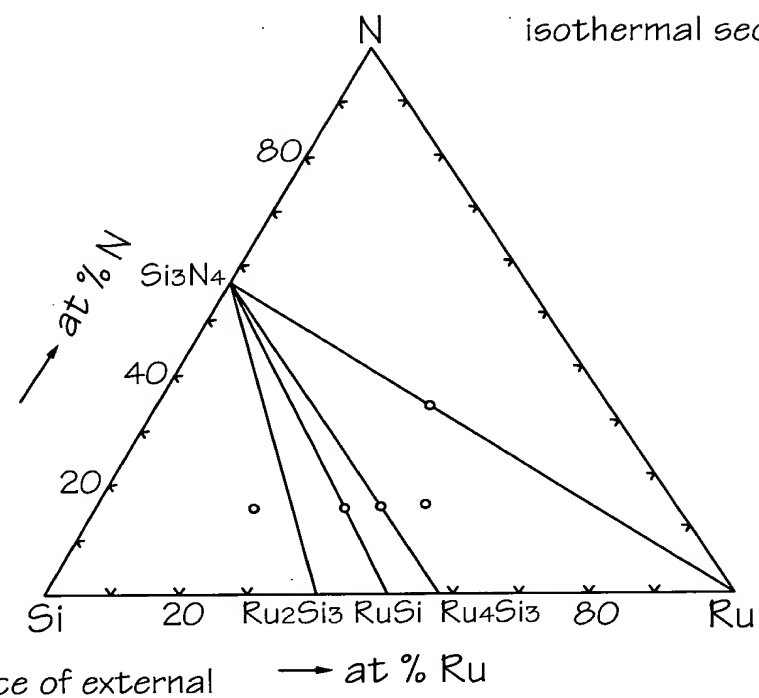
FIG. 4B

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Ru-Si-N Isothermal Section  
at 1000°C

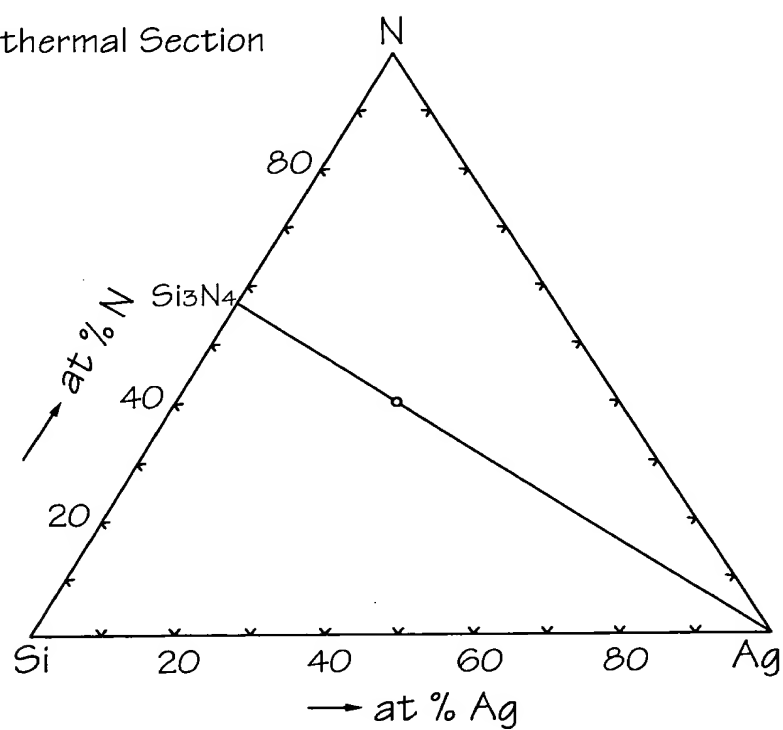
isothermal section 1273 K



In the absence of external  
nitrogen pressure.

→ at % Ru  
FIG. 4C

Ag-Si-N Isothermal Section  
at 900°C



→ at % Ag

FIG. 4D

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Au-Si-N Isothermal Section  
at 900°C



FIG. 4F

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Ag-B-N Isothermal Section  
at 800°C

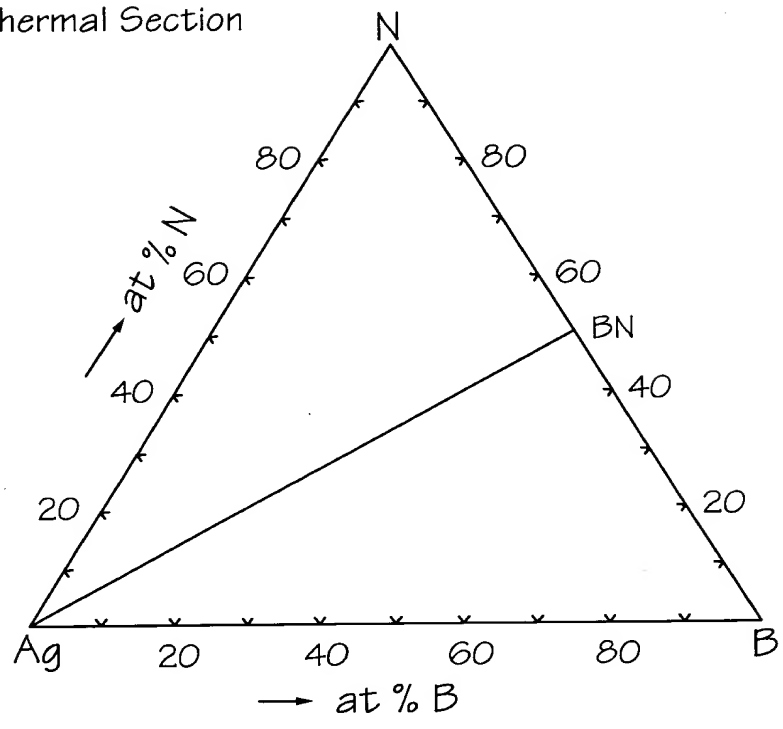


FIG. 4G

Au-B-N Isothermal Section  
at 800°C

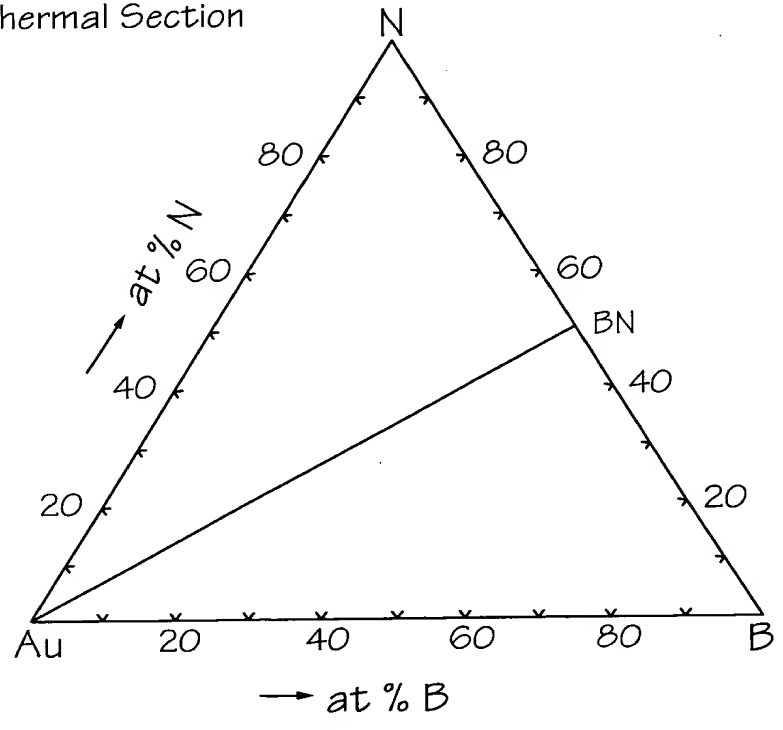


FIG. 4H

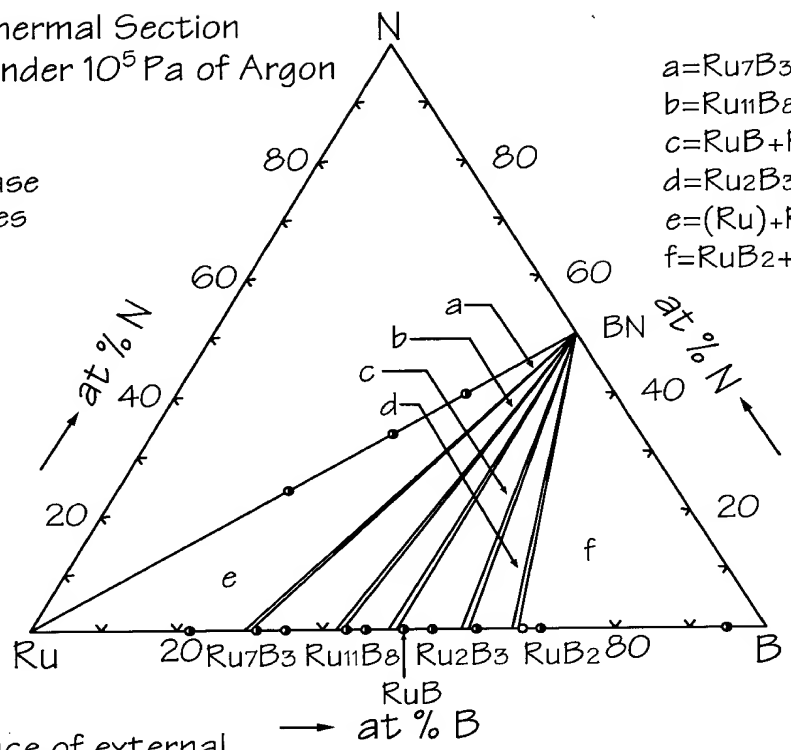
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Ru-B-N Isothermal Section  
at 1200°C Under 10<sup>5</sup> Pa of Argon

- single phase
- two phases

- a=Ru<sub>7</sub>B<sub>3</sub>+Ru<sub>11</sub>B<sub>8</sub>+BN
- b=Ru<sub>11</sub>B<sub>8</sub>+RuB+BN
- c=RuB+Ru<sub>2</sub>B<sub>3</sub>+BN
- d=Ru<sub>2</sub>B<sub>3</sub>+RuB<sub>2</sub>+(BN)
- e=(Ru)+Ru<sub>7</sub>B<sub>3</sub>+BN
- f=RuB<sub>2</sub>+(B)+BN

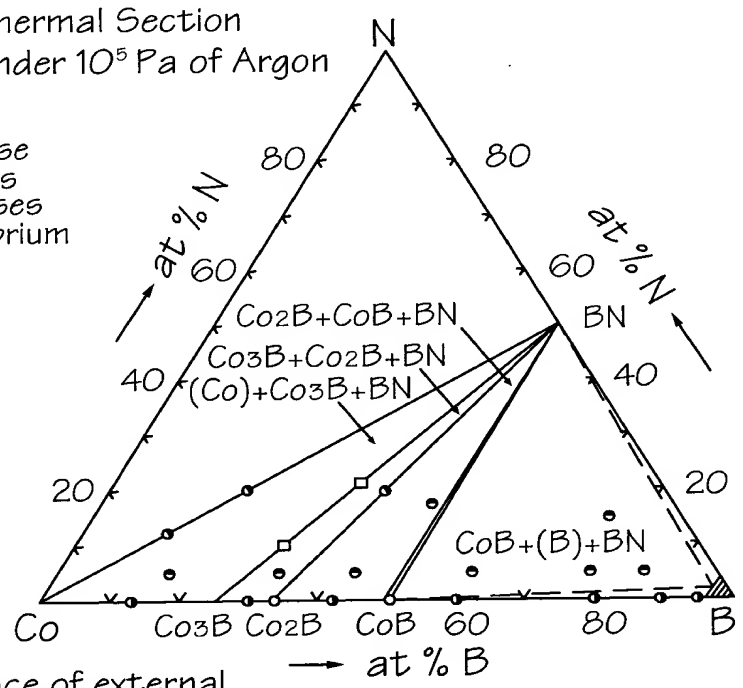


In the absence of external  
nitrogen.

→ at % B  
FIG. 4I

Co-B-N Isothermal Section  
at 900°C Under 10<sup>5</sup> Pa of Argon

- single phase
- two phases
- three phases
- non-equilibrium (no Co<sub>3</sub>B)



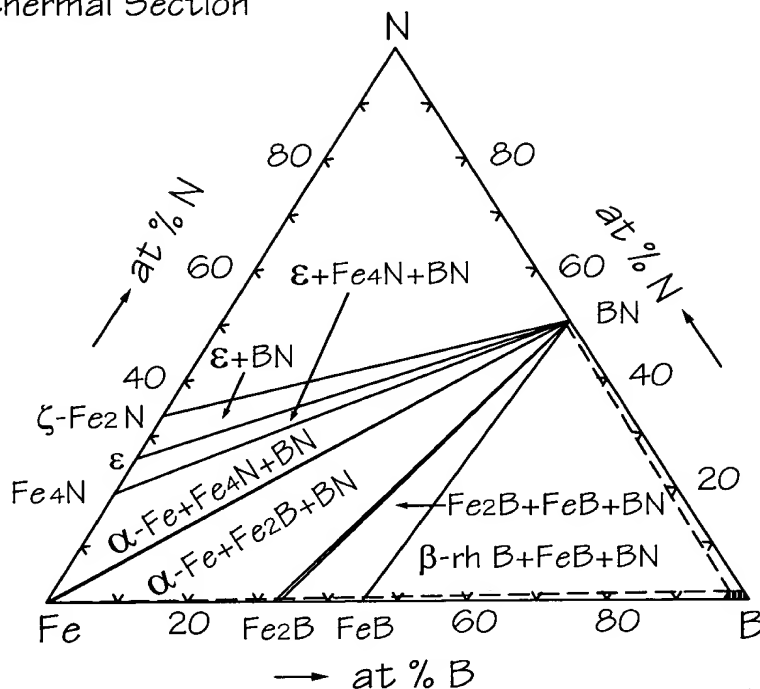
In the absence of external  
nitrogen.

→ at % B  
FIG. 4J

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Fe-B-N Isothermal Section  
at 400°C

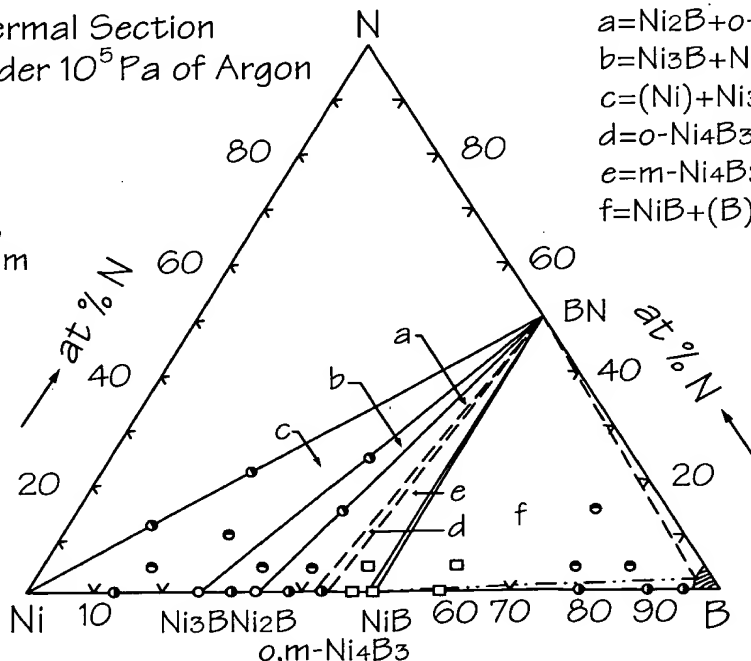


In the absence of external  
nitrogen.

FIG. 4K

Ni-B-N Isothermal Section  
at 900°C Under  $10^5$  Pa of Argon

- single phase
- two phases
- ◐ three phases
- ◑ non-equilibrium



In the absence of external  
nitrogen.

FIG. 4L

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FIG. 5

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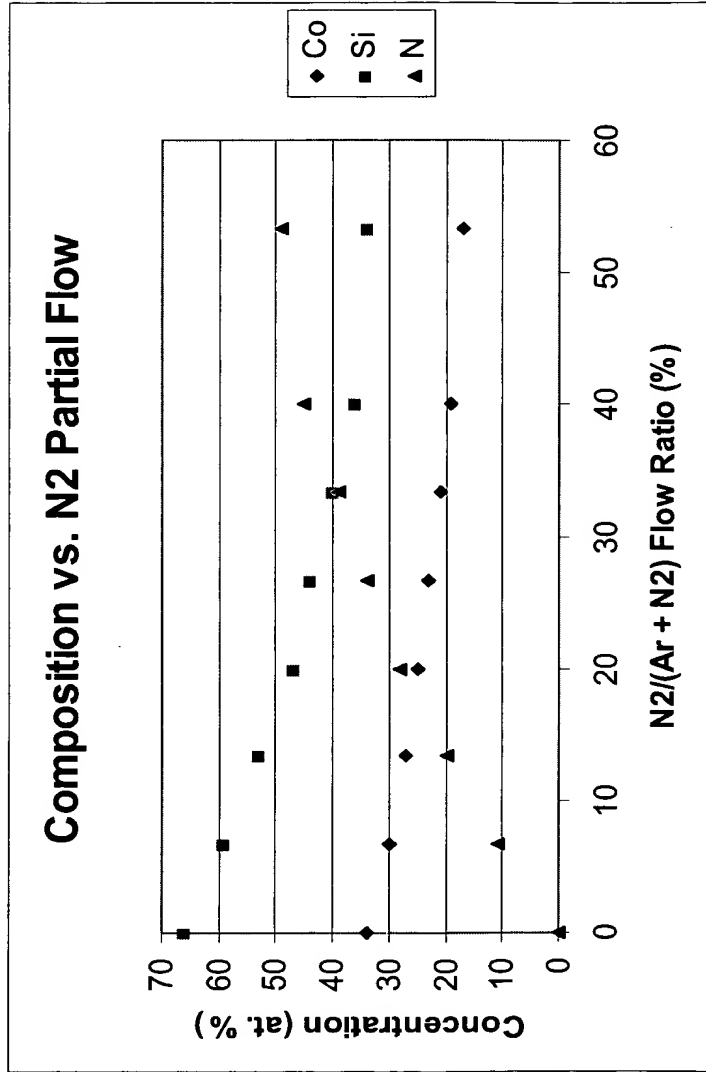


FIG. 5



APPROVED	O.G. FIG.
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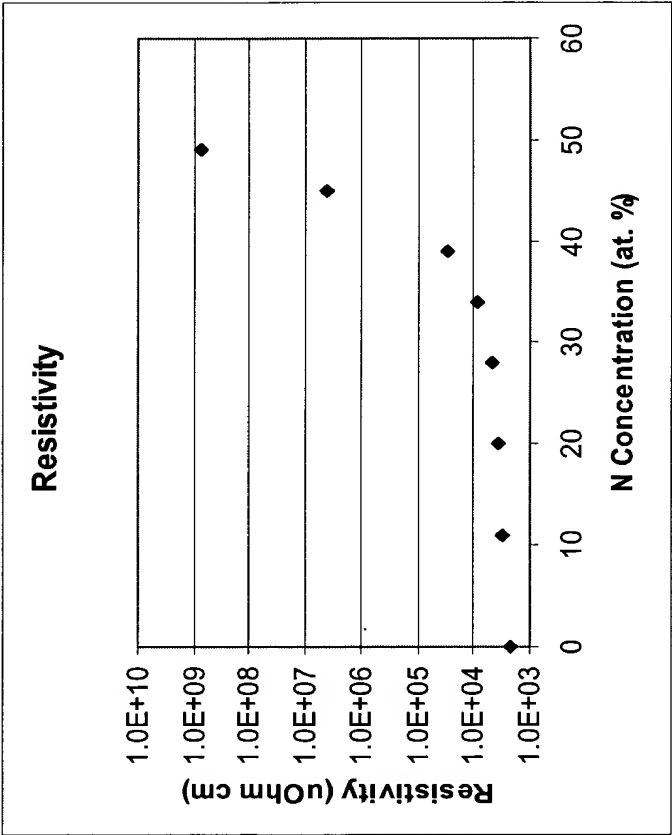


FIG. 6



APPROVED	O.G. FIG.
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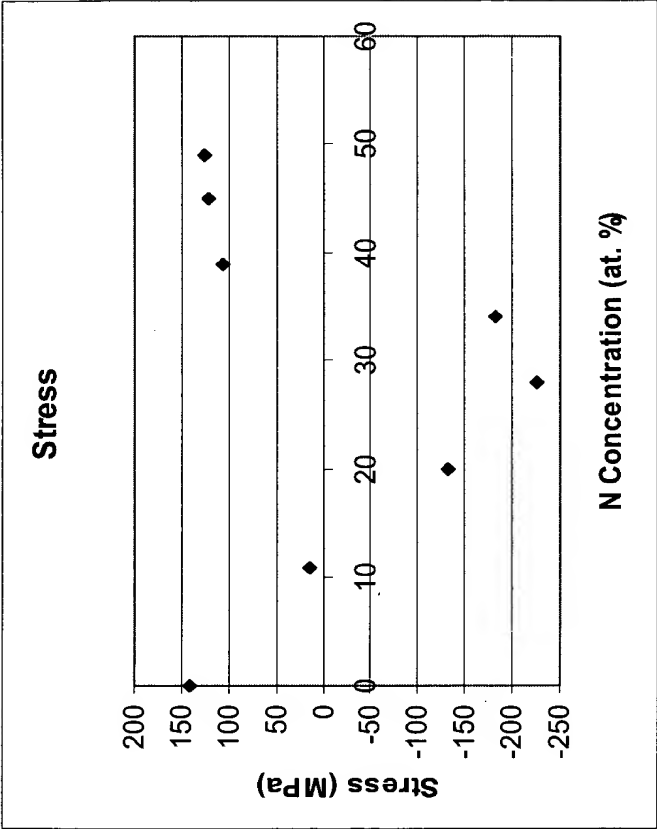


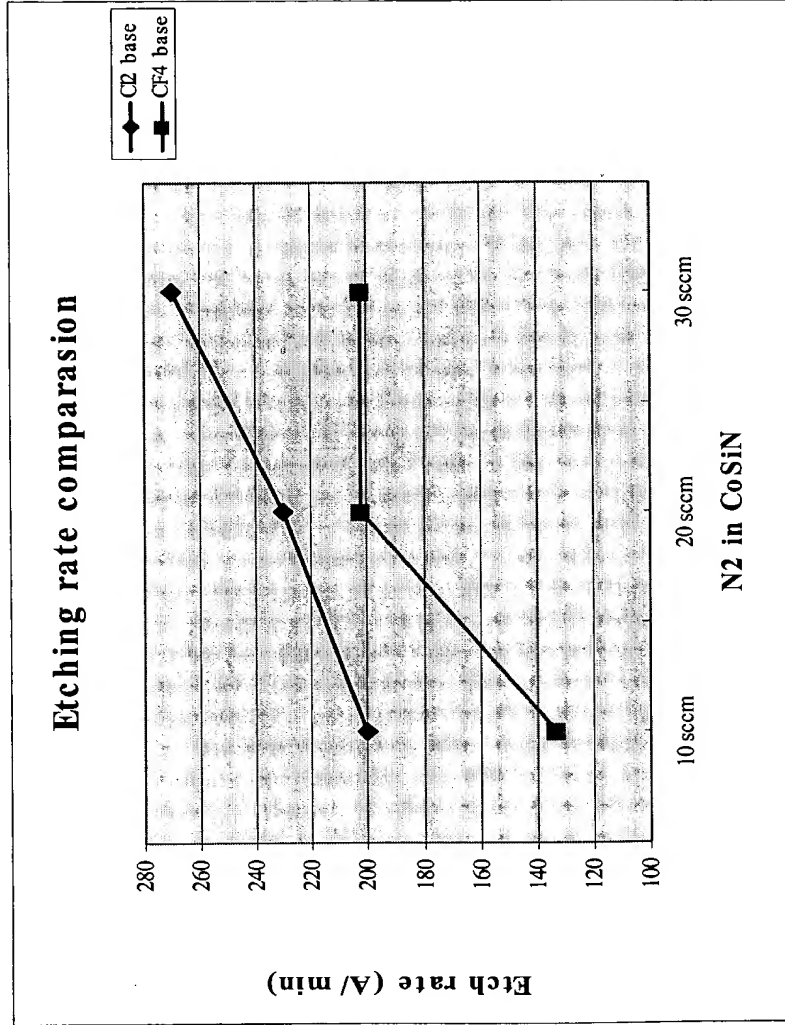
FIG. 8

APPROVED	O.G. FIG.	
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TOP SECRET 2E33T650

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	10 sccm	20 sccm	30 sccm
Cl <sub>2</sub> base	200	230	270
CF <sub>4</sub> base	133	202	202



**FIG. 9**